September 13, 1958

Dr. A. J. Bateman
Christie Hospital and Holt Radium Inst.
Withington
Manchester 20, England

Dear Dr. Bateman:

Thank you for your letter of June 16. It was forwarded here to me from Melbourne but arrived during my own absence in the United Kingdom. It is a pleasure to receive criticism at this level.

I would like to tackly your questions myself but for various reasons I think it would be more appropriate to clear them with Dr. Nossal, and for that reason I have forwarded this correspondance to him for reply. I am sure that you will find he has anticipated most of your remarks and will give a very satisfactory account for them.

It would, of course, be premature to erect the single productivity of antibodies by a single cell to the status of a general law and one can imagine that the possible interference between different potentialities might occur at any of the series of stages from the initial challenge to the internal mechanisms responsable for antibody specificity.

However, that such a mutual interference does exist at some level is an empirical conclusion that should be taken account of in any theoretical development.

As it will take some time for this letter to reach Dr. Nossal and for his reply to reach you, let me just mention that the specific points that you bring up have been taken care of in more recent work by Dr. Nossal which is in press at the present time. You will even find a discussion of the relationship of the proportion of inhibitory droplets to the number of cells in each drop.

The idea of preadaptive stabilization of antibody forming clones, as proposed by Burnet, seems to me fraught with difficulties but it is an extremely provocative proposal. I have in press a modification of it which is tantamount to the idea that randimization of antibody forming capacity is taking place all the time and that this is stabalized only after experience with a homolygous antigen. The crucial question may well turn out to be the range of potentiality for antibody production exhibited by the progeny of a single cell.

Yours sincerely,

Joshua Lederberg
Professor of Medical Genetics